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### Abstract

Bacteria attached to antibody are detected with resonance Raman spectroscopy. The bacteria are detected directly in a great numerical excess, e.g. 100 to 10,000 of antibody molecules. A sample to be tested is placed in a medium, the medium containing antibodies attached to a surface for binding to a specific bacteria to form an antigen to antibody complex. The medium is contacted with a beam of light energy. The energy emitted from the nucleic acid of the bacteria, as a lower resonance enhanced Raman backscattered energy is analyzed for the presence or absence of the bacteria.

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